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# **CHECKLIST FOR PREPARING BASIC SPECIFICATIONS FOR A LIGHT DUTY SIGN AND/OR SERVICE TRUCK**

**APRIL 1984**

PUBLICATION NO.: H - 84 - 4

**PURDUE UNIVERSITY - SCHOOL OF CIVIL ENGINEERING**

**In cooperation with**

**INDIANA DEPARTMENT OF HIGHWAYS**

**INDIANA ASSOCIATION OF COUNTY COMMISSIONERS**

**INDIANA ASSOCIATION OF CITIES AND TOWNS**

**FEDERAL HIGHWAY ADMINISTRATION**





HIGHWAY EXTENSION AND RESEARCH PROJECT  
FOR INDIANA COUNTIES AND CITIES

April 18, 1984

Attached is a Checklist for Preparing the Basic Specifications for a Light Duty Sign and/or Service Truck.

A sample specification with statements, format and wording is available in the HERPICC publication "A Checklist and Sample Specifications for Single and/or Tandem Axle Dump Trucks", February 1983.

The information in this publication was developed by the HERPICC Task Group on Maintenance Equipment Guidelines composed of the following:

Jim Harper, Street Commissioner, Crawfordsville  
Lloyd Jones, Professor, Civil Engineering, Purdue  
Sherril Page, Sullivan County Surveyor  
Eugene Shurte, LaPorte County Road Supervisor  
J. William Strange, Hancock County Highway Engineer  
Dick Thompson, Huntington County Engineer  
Sean Watt, Director of Division of Transportation, South Bend  
Wallace W. West, Indiana Department of Highways

HERPICC is proud to acknowledge the time and effort these men put into developing these items.

Other publications on Maintenance Guidelines are:

"A Checklist and Sample Specification for Single and/or Tandem Axle Dump Trucks", February 1983.

"A Checklist for Front End Loaders", May 1983.

"A Checklist for Preparing Basic Motor Grader (29,000 lbs. class) Specifications", HERPICC Publication, H-83-7.

If you wish to obtain a copy please contact HERPICC. If you have comments or suggestions, please write to me.

Sincerely,

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CHECKLIST  
FOR  
PREPARING BASIC SPECIFICATIONS FOR A LIGHT DUTY SIGN AND/OR SERVICE TRUCK

The following pages contain suggested items to be considered when seeking bids for a service truck to be used for sign maintenance or other general service.

General description of equipment being bid.

Statement of requirement of manufacture of equipment.

Statement of standardization of all component parts of unit.

Statement of parts availability and access.

Statement of location of manufacturer and/or assembly of unit(s).

Statement of bid submitting requirements.

Statement of indemnification of local agency concerning patent devices.

Statement concerning description of term "or equal".

Statement of terms for accepting unit(s), new and used, year hold overs, inspection of unit(s), local, state and federal requirements, disposition of trade-in unit(s).

Vender shall provide the following engine information:

Vehicle Make \_\_\_\_\_ Model \_\_\_\_\_ Year \_\_\_\_\_

Engine (Gasoline) (Diesel) (Natural Gas) (Propane)

Make \_\_\_\_\_ Model \_\_\_\_\_

Number of Cylinders \_\_\_\_\_ stroke-cycle.

Bore and Stroke \_\_\_\_\_ x \_\_\_\_\_

Displacement \_\_\_\_\_ cubic inches

Taxable Horse Power \_\_\_\_\_

Gross Brake Horse Power \_\_\_\_\_ @ \_\_\_\_\_ R.P.M.'s

Note: Vendor is to complete this Checklist and submit in duplicate with Bid. Failure to complete and submit the Checklist may cause the bid to be rejected.

Continuous (Net) Brake Horse Power \_\_\_\_\_ @ \_\_\_\_\_ R.P.M.'s

Governed Speed \_\_\_\_\_ R.P.M.'s

Peak Torque \_\_\_\_\_ ft. lbs. @ \_\_\_\_\_ R.P.M.'s

Compression Ratio \_\_\_\_\_ :

Carburetion (Carburetor) (Naturally Aspirated) (Turbo Charged)

(2 Bbl) (4 Bbl) (Other)

Extended Warranty (Yes) (No)

Cooling System: Radiator Capacity \_\_\_\_\_ quarts

Overflow recovery system (Yes) (No)

Corrosion Resistor (Yes) (No) Type \_\_\_\_\_ Location \_\_\_\_\_

Silicone Hose System (Yes) (No)

Engine Block Heater(s) (Yes) (No) Number \_\_\_\_\_ Size \_\_\_\_\_ Watts

Type \_\_\_\_\_ Location \_\_\_\_\_

Filters: Air-Type \_\_\_\_\_ Location \_\_\_\_\_

Oil - Number \_\_\_\_\_ Location \_\_\_\_\_

Fuel (Yes) (No) Type \_\_\_\_\_ Location \_\_\_\_\_

Water (Yes) (No) Type \_\_\_\_\_ Location \_\_\_\_\_

Starter: Rated Heaviest Duty for this application by manufacturer

Alternator/Generator: \_\_\_\_\_ amperes (Brush) (Brushless)

Make and Model \_\_\_\_\_

Regulator: (Integral) (External)

Ignition: (Compression Ignited) (Spark Ignited)

Batteries: Quantity \_\_\_\_\_ (Standard) (Maintenance Free)

Voltage \_\_\_\_\_

Ampere Hour Capacity \_\_\_\_\_ Cold Crank Power @ 0 degree F \_\_\_\_\_

Dry Weight (each) \_\_\_\_\_ Group Number \_\_\_\_\_

Mounting Location \_\_\_\_\_

Electrical System: (Standard) (Weatherproof) (Betts System)

(Or Equal) (Circuit Breakers) (Fuses)

Headlights: Type \_\_\_\_\_

Tail Lights - Type and Location \_\_\_\_\_

Working Lights - Type and Location \_\_\_\_\_

Watts \_\_\_\_\_ Candle Power \_\_\_\_\_

Strobe Lights - Candle Power \_\_\_\_\_ (Fixed) (Variable)

Separate Power Source (Yes) (No)

Mounting Location(s) \_\_\_\_\_

Arrowboard (Yes) (No)

Exhaust System: (Left Side) (Right Side) (Rear)

(Single) (Dual)

Muffler - (Standard) (Stainless Steel)

Clutch: Size \_\_\_\_\_

Transmission: (Manual) (Automatic) Model \_\_\_\_\_

Number of (Gears) (Speeds) Forward \_\_\_\_\_ Reverse \_\_\_\_\_

Auxilliary Cooler (Yes) (No) Temperature Gauge (Yes) (No)

Power Take Off for Central Hydraulics (Yes) (No)

Gross Vehicle Weight: \_\_\_\_\_ pounds

Front Axles: Load Rate at ground \_\_\_\_\_ pounds

Power Steering (Yes) (No)

Stabilizers (Yes) (No)

Shock Absorbers Type \_\_\_\_\_

NOTE: Notify vendors if a snow plow will be mounted on front of truck and approximate weight of the plow and complete hitch.

Rear Axle(s): Model \_\_\_\_\_

Load Rate at ground \_\_\_\_\_ pounds

No Spin (Yes) (No)

Gear Ratio(s) \_\_\_\_\_

Springs: Front Springs - Load capacity at ground (total) \_\_\_\_\_ lbs.

Rear Springs - Load capacity at ground (total) \_\_\_\_\_ lbs.

Auxiliary Springs: Load capacity (total) \_\_\_\_\_ lbs.

Wheels: Size \_\_\_\_\_ (5 hole) (3 hole)

Wheels shall conform to American Wheel and Rim Association standards.

Tires: (Radial) (Tubeless) (Tube Type)

Tread Style - Front \_\_\_\_\_ Rear \_\_\_\_\_

Tire Size - Front \_\_\_\_\_ Ply \_\_\_\_\_ Quality \_\_\_\_\_

Rear \_\_\_\_\_ Ply \_\_\_\_\_ Quality \_\_\_\_\_

Frame

Yield Strength \_\_\_\_\_ psi. RBM \_\_\_\_\_ Section Modulus \_\_\_\_\_

Reinforcement (Yes) (No) Description \_\_\_\_\_ Section Modulus \_\_\_\_\_

Frame Extensions (Yes) (No) Length \_\_\_\_\_

Chassis Dimensions and Weights

Cab to Axle (CA) \_\_\_\_\_ inches. Overall Length (OAL) \_\_\_\_\_ inches

Wheel Base (WB) \_\_\_\_\_ inches. Weight on Front Axle \_\_\_\_\_ pounds

Axle to Rear Frame End (AF) \_\_\_\_\_ inches. Weight Rear Axle \_\_\_\_\_ pounds.

Bumper to Behind Cab (BBC) \_\_\_\_\_ inches

Turning Radius (dia. of Tire) \_\_\_\_\_. Total Weight \_\_\_\_\_ pounds

Brake System: (Hydraulic Assisted) (Disk) (Shoes)

(Front Disk - Rear Drum)

Pad Size: Front \_\_\_\_\_ Rear \_\_\_\_\_ Total Area \_\_\_\_\_ Square Inches \_\_\_\_\_

Drum Diameter \_\_\_\_\_ Shoe Width \_\_\_\_\_

Parking Brakes Specifications \_\_\_\_\_

Fuel Tanks



Size of each tank \_\_\_\_\_gallons. Number of tanks \_\_\_\_\_

Tank Marking (Diesel #1 or #2) (Gasoline - Regular, Unleaded, etc.)

Cab

Ventilated and Insulated (Standard) (Deluxe)

Tinted Glass (Yes) (No) (Windshield Only) (All Windows)

Inside Dome Light (Manual Operated) (Door Operated)

Cigar Lighter (Yes) (No)

Seats (Bench Type) (Bucket Type)

Heater and Defroster (Standard) (Heavy Duty)

Air Conditioning (Yes) (No) (Standard) (Deluxe)

Sun Visors (One) (Dual)

Arm Rests (One) (Dual)

Radio (Yes) (No) (AM/FM) (AM)

Windshield Wipers & Washers (2 Speed) (Intermittent) (Electric) (Air)

Right Side Door Window Control (Manual) (Electric)

Mirrors - Size \_\_\_\_\_. Type \_\_\_\_\_

Adjustable Convex Mirror on Right Side (Yes) (No) Size \_\_\_\_\_

Backup Alarm (Yes) (No) Type \_\_\_\_\_

Exterior Grab Handles (Yes) (No)

Locking Hand Throttle (Yes) (No)

Hood (Interior Lock) (Exterior Lock)

Dash Mounted Gauges

Fuel (Switchable to either tank) (Separate gauge each tank)

Tachometer (Yes) (No)

Hourmeter (Yes) (No)

Ammeter/Voltmeter (Light) (Needle Type) (Calibrated)

Oil Pressure (Light) (Needle Type) (Calibrated)

Water Temperature (Light) (Needle Type) (Calibrated)

Paint: Color \_\_\_\_\_ Type \_\_\_\_\_

Preparation \_\_\_\_\_

Rustproofing

Interior (cab) - Type of Material \_\_\_\_\_

Exterior (cab) - Type of Material \_\_\_\_\_

Frame - Type of Material \_\_\_\_\_

Warranty of Cab and Chassis

Rustproofing warranty equal to cost of rustproofing \_\_\_\_\_

Rustproofing warranty equal to cost of actual repairs \_\_\_\_\_

Rustproofing warranty equal to length of warranty of truck \_\_\_\_\_

Description \_\_\_\_\_

Manuals

Operators, parts and service (Number of each required) \_\_\_\_\_

Delivery Time

List of number of weeks required for delivery of Unit(s) from  
date of order \_\_\_\_\_ weeks.

Bed/Accessories

Length \_\_\_\_\_ Width \_\_\_\_\_

Cab Protector Type \_\_\_\_\_

Safety Rails \_\_\_\_\_

Cross Members Type \_\_\_\_\_ Number \_\_\_\_\_

Deck - Wood Thickness \_\_\_\_\_ Steel Gage \_\_\_\_\_

Standard Reinforcement (Yes) (No)

Optional Reinforcement (Yes) (No) Type \_\_\_\_\_

Rear Step/Bumper

Hitch Type \_\_\_\_\_

Compartments/Racks

Signs (Yes) (No) Dimensions \_\_\_\_\_

Tools & Equipment (Yes) (No) Dimensions \_\_\_\_\_

Parts

Fasteners

Barricades

Special Equipment

Post Drivers (Yes) (No) Description \_\_\_\_\_

Post Puller (Yes) (No) Description \_\_\_\_\_

Welders/Torches

Power Source(s) (Air) (Electric) (Hydraulic) (Other) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

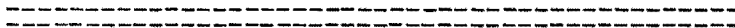
Lifts/Hoists - Description \_\_\_\_\_

Swing Out/Sliding Platform (Yes) (No) Description \_\_\_\_\_



## APPENDIX

The five figures presented in this Appendix were prepared from sketches contributed by Richard Thompson, Huntington County. They are suggestions developed from his experience in fabricating a sign maintenance truck for their county use.



If you have a suggestion for a helpful device or arrangement - please share it with others by sending a sketch/photo and description of it to HERPICC for possible inclusion in future guidelines.

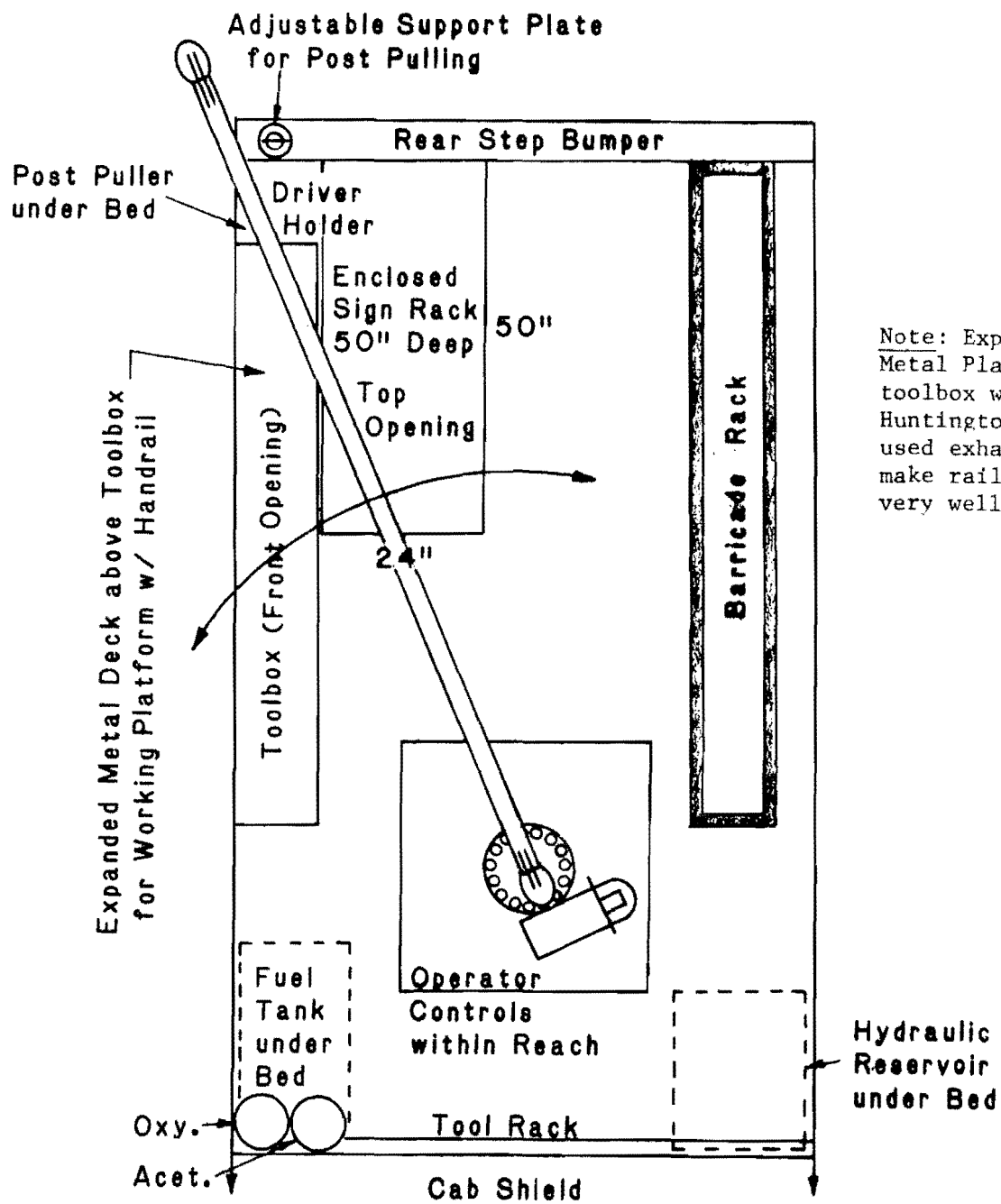
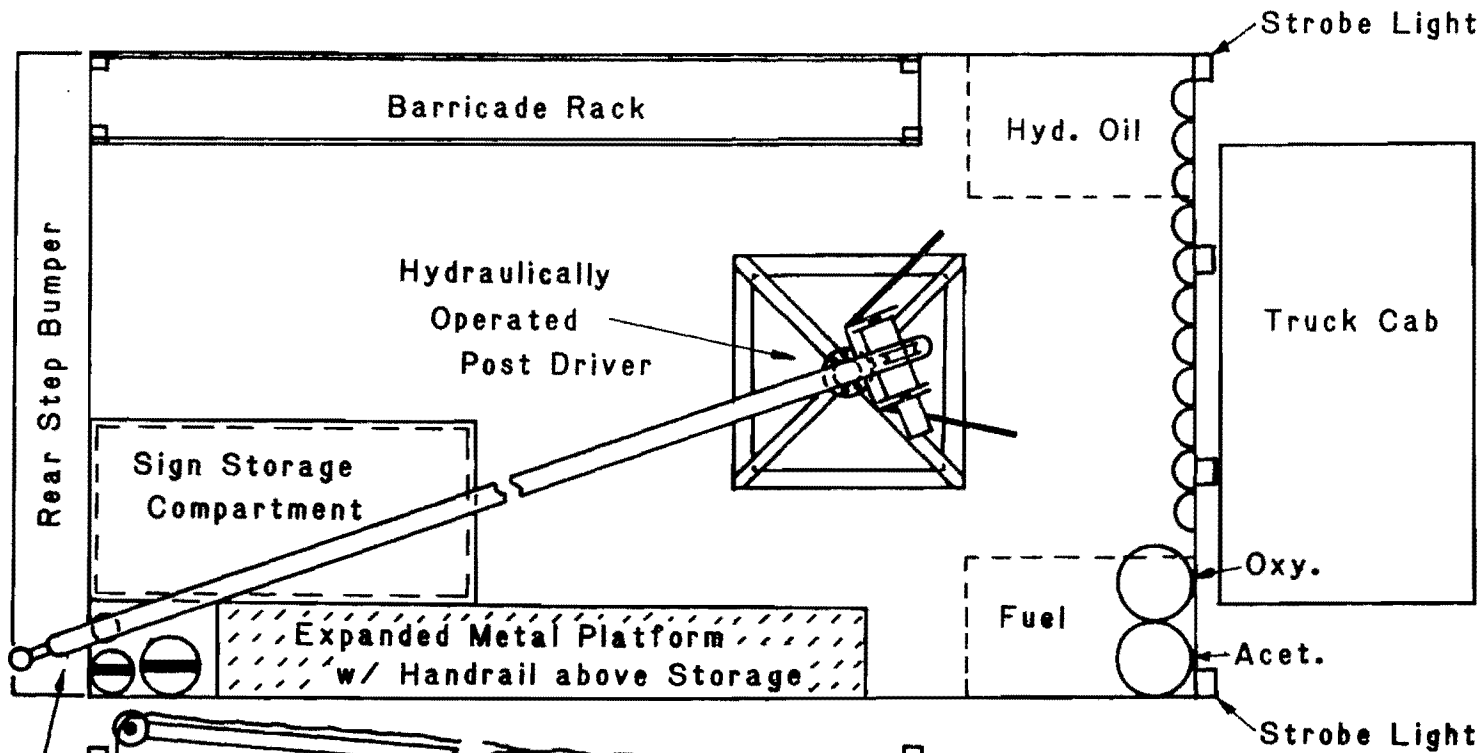
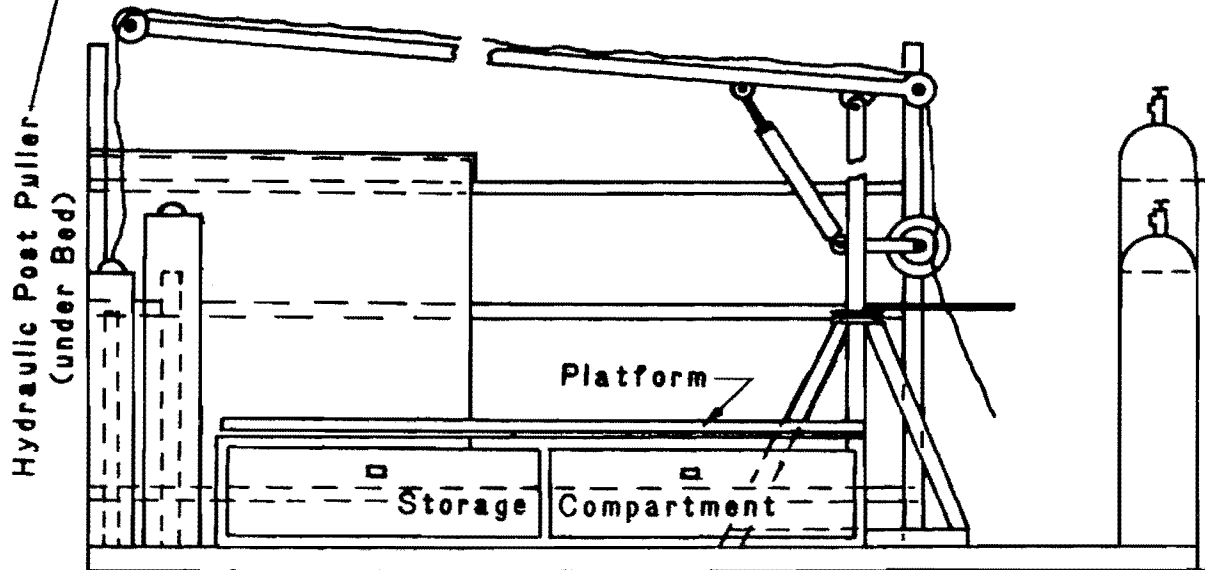


FIGURE 1. SUGGESTED ARRANGEMENT FOR A SIGN MAINTENANCE TRUCK

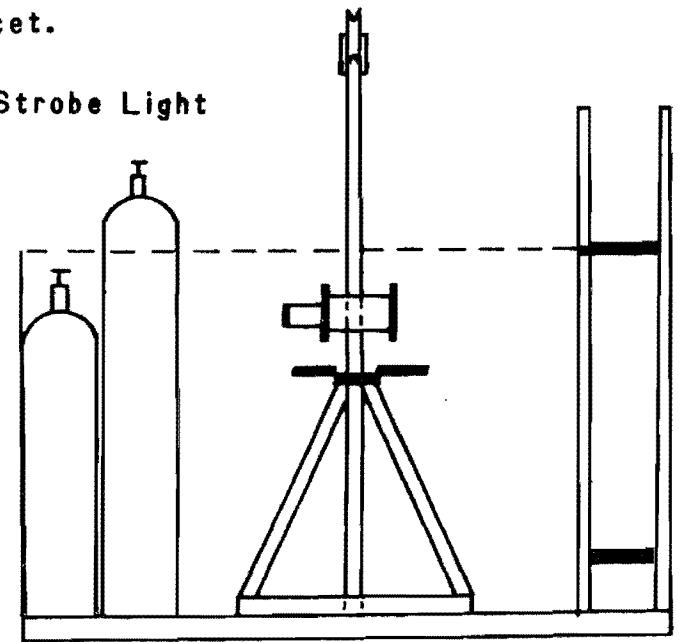
# TOP VIEW



Note: 60 lb. and 100 lb. weights are available on this truck for post driving using a 3/4" rope.



# RIGHT SIDE VIEW



# FRONT VIEW

FIGURE 2. A SUGGESTED LAYOUT FOR A SIGN MAINTENANCE TRUCK

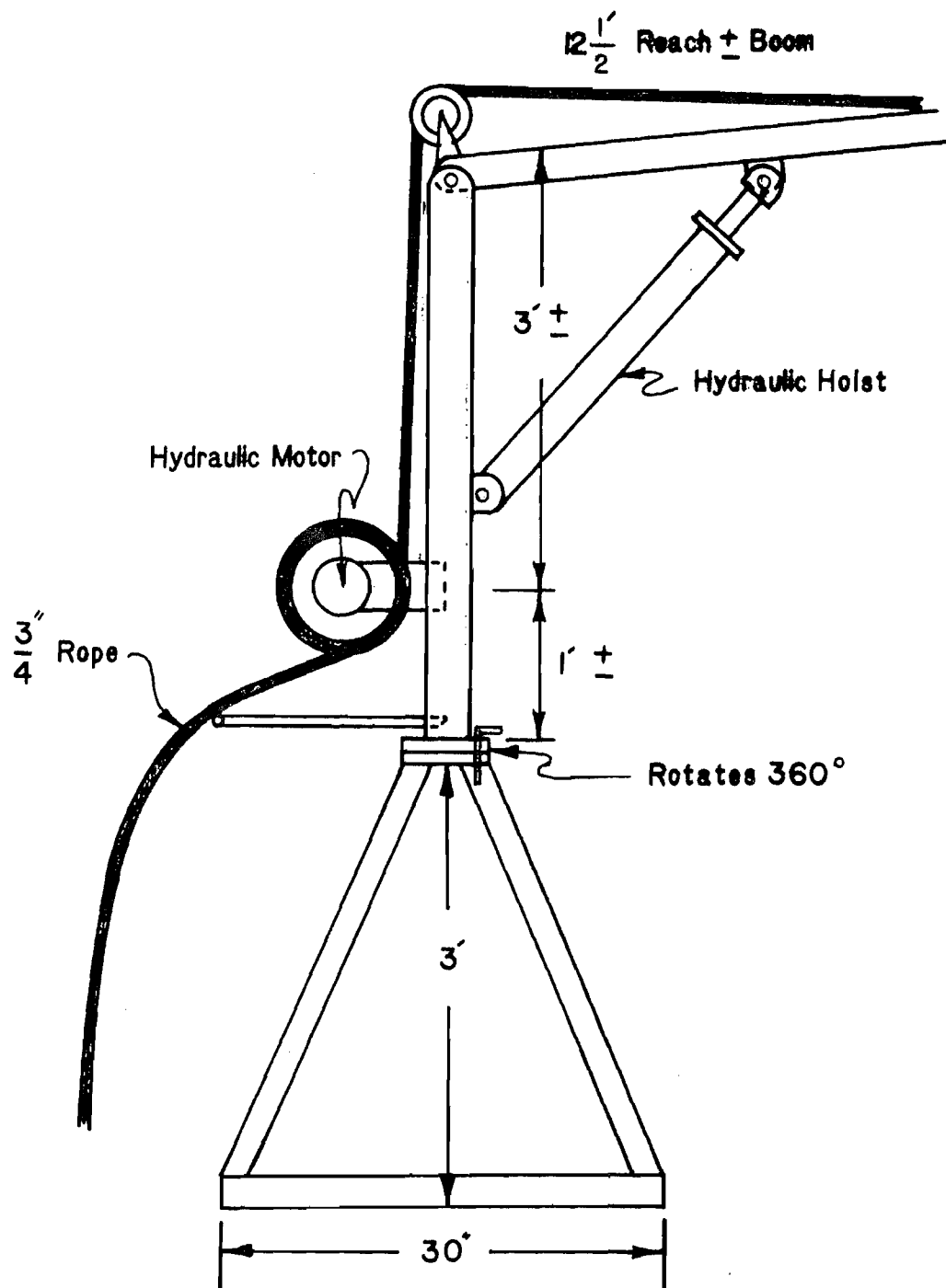


FIGURE 3. SUGGESTED ARRANGEMENT FOR THE HYDRAULICALLY OPERATED POST DRIVER



Barricade Rack

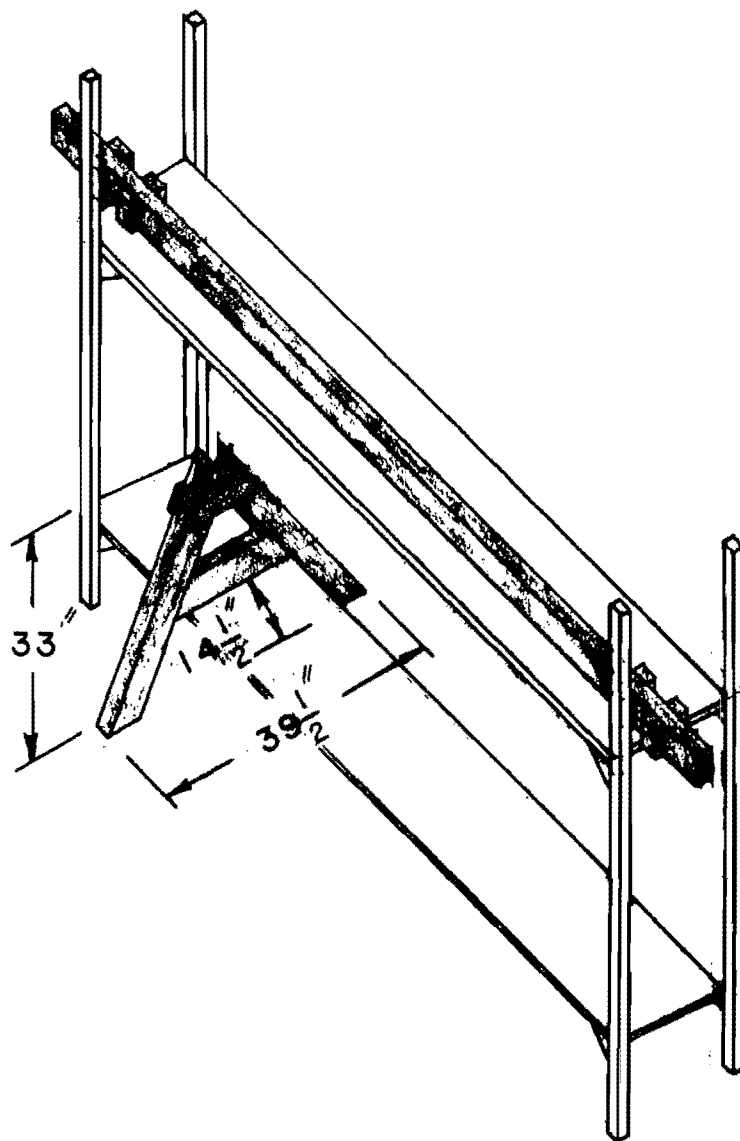


FIGURE 4. SKETCH OF A BARRICADE RACK

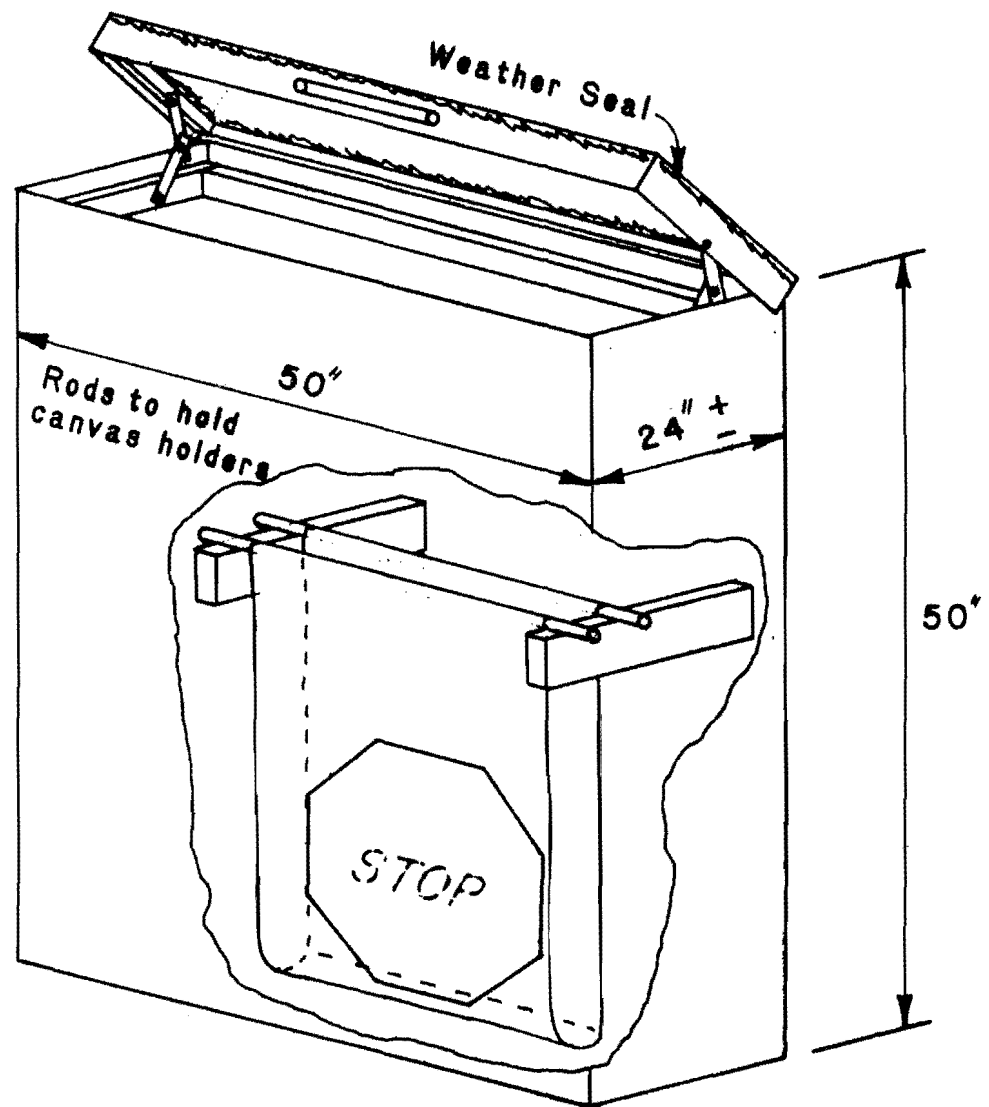


FIGURE 5. SKETCH OF A SIGN STORAGE BOX

Note: Make as nearly weather tight (dustproof) as reasonable. Huntington County used metal rods with about 48" x 100" canvas pockets which can be lifted out for easy sign removal. Also used some more shallow for smaller signs.



**P.A.** Checklist for Preparing Basic Specifications for a Light  
Duty Sign and/or Service Truck

